

## ABSTRACT

The invention relates to a circuit arrangement, a sensor array and a biosensor array. The circuit arrangement comprises a substrate, a sensor element configured on a surface area of the substrate with a physical parameter which can be coupled to a substance to be analyzed; The type of coupling comprises a resistive component and a calibrating device embodied in or on the substrate and arranged in such a way that a modification of the value of the physical parameter of the sensor element can be at least partially compensated therewith. Preferably, the sensor element of the circuit arrangement is provided with an electrically conductive sensor electrode which can be coupled to the substance to be analyzed. The sensor element can also comprise a measuring transistor with a gate connection which is coupled to the electrically conductive sensor electrode.